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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/506,741	02/18/2000	Victor S Lobanov	1503.0730000	7797

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EXAMINER

CLOW, LORI A

ART UNIT PAPER NUMBER

1631

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/506,741

Applicant(s)

LOBANOV ET AL.

Examiner

Lori A. Clow, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,7,8,10-26,31,32 and 34-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,7,8,10-26,31,32 and 34-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

In view of the Appeal Brief filed on 2 November 2006, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

Claims 1, 2, 7, 8, 10-26, 31, 32, and 34-48 are currently pending.

### **Claim Rejections - 35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 2, 7, 8, 10-26, 31, 32, and 34-48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Instant claims 1 and 25 recite a “computer implemented method of analyzing a non-enumerated library” or an “enumerated library”, respectively. The steps comprise selecting combinations, enumerating compounds, deconvoluting, enumerating and synthesizing at least

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one K compound. In the instant claim “synthesizing” may be a virtual synthesis, as is stated in the specification at page 10. As the claim reads only on virtual data manipulation the claims are drawn to non-statutory subject matter. A statutory process must include a step of a physical transformation of matter, or produce a concrete, tangible, and useful result [State Street Bank & Trust Co. v. Signature Financial Group Inc. CAFC 47 USPQ2d 1596 (1998)], [AT&T Corp. v. Excel Communications Inc. (CAFC 50 USPQ2d 1447 (1999))]. In the instant case, a step of physical transformation is not present. In such case, the claims are evaluated for whether or not they produce a result which is concrete, tangible, and useful. The synthesis of a K compound does not provide a specific result therefore, failing to accomplish a practical application (i.e. results in a *physical* transformation or produces a concrete, tangible, and useful *result*) and therefore, the claims are non-statutory.

Claims 23 and 47 are directed to a computer based system. Claims 24 and 48 are directed to a computer program product. While the system comprises “means for” and the product provides “functions”, the system and product fail to provide a practical application. In the instant case the “means for” and the “logic”, for instance, do not accomplish a practical application (i.e. results in a *physical* transformation or produces a concrete, tangible, and useful *result*) and therefore, the claims are non-statutory.

This rejection could be overcome by amending the claims to recite that a result of the method is “displayed” or “outputted” (e.g. output to a user, a display, a memory, or another computer, etc.), or by amending the claims to include a step of a physical transformation of matter (e.g. assay). For an updated discussion of statutory considerations with regard to non-

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functional descriptive material and computer-related inventions, see the Guidelines for Patent Eligible Subject Matter in the MPEP 2106, Section IV.

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, 7, 8, 10-26, 31, 32, and 34-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 24, and 25 recites, "generating **said** focused library of at least one compound". There is insufficient antecedent basis for "said focused library". Clarification is requested.

Claim 1 recites, "selecting at least one K compound". It is unclear from where the "K compound" is selected. Is it selected from the compounds of step (g)? Are the compounds in step (g) intended to be a new set? Based upon what are the compounds selected? Clarification is requested.

Instant claim 1, recites "generating said focused library of at least one compound based on said building blocks and enumerating at least one compound in said focused library of at least one compound and selecting at least one K compound". It is unclear what the relationship is between steps (a) to (f) and the "selecting and synthesizing" steps of (g) and (h), as it is not clear that these steps are related in any way. It appears as if the claim is incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the relationship of "generating a focused library and

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enumerating one compound” to “selecting” and “synthesizing” a K compound. It is unclear what the parameters of K compound selection are or if the K compound chosen is related at all to the previous steps. Clarification is requested.

Claims 10 and 11 recite, “refining said initial subset”. Based upon what about the fitness function are the subsets refined? Clarification is requested.

Claims 14 and 15 recite, “selecting said M compounds based on said ranking”. It is unclear what about the ranking is assessed to “select” a compound. Clarification is requested.

### **Claim Rejections - 35 USC § 112**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 7, 8, 10-26, 31, 32, and 34-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a written description rejection.

Instant claims 1, 23, 24, 25, 47, and 48 recite “deconvoluting said M compounds into their associated building blocks”. The specification fails to describe the process of “deconvolution of compounds into their associated building blocks”. The specification states that “once M compounds are selected, based on the fitness function, from the first set of enumerated compounds, these M compounds are then deconvoluted into their building blocks

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(i.e., reagents), in step 110 (page 19 and page 25). However, the specification fails to describe the process of “deconvolution”.

Instant claim 1, recites “generating said focused library of at least one compound based on said building blocks and enumerating at least one compound in said focused library of at least one compound and selecting at least one K compound”. The specification fails to describe the selection of one K compound without any parameters from which to select the compound, as is instantly recited.

### **Conclusion**

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

The outstanding rejections under 35 USC 102(e) over Cramer have been withdrawn in view of Applicant’s arguments in the Appeal Brief filed 2 November 2006.

No claims are allowed.

### **Inquiries**

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The Central Fax Center Number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lori A. Clow, Ph.D., whose telephone number is (571) 272-0715. The examiner can normally be reached on Monday-Friday from 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Andrew Wang can be reached on (571) 272-0811.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

January 22, 2007

Lori A. Clow, Ph.D.

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*Lori A. Clow**Patent Examiner**1/22/07**J. D. Schultz*

JAMES SCHULTZ, Ph.D.

*Supervisory* PRIMARY EXAMINER